

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Develop an  
Electricity Integrated Resource Planning  
Framework and to Coordinate and Refine  
Long-Term Procurement Planning  
Requirements.

Rulemaking 16-02-007  
(Filed February 11, 2016)

**COMMENTS OF THE BAY AREA MUNICIPAL TRANSMISSION GROUP IN  
RESPONSE TO ADMINISTRATIVE LAW JUDGE'S RULING SEEKING  
COMMENT ON STAFF PROPOSAL ON PROCESS  
FOR INTEGRATED RESOURCE PLANNING**

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The Bay Area Municipal Transmission Group (“BAMx”)<sup>1</sup> appreciates the opportunity to provide comments in response to the Administrative Law Judge’s Ruling (“Ruling”) seeking comment on the Energy Division (“ED”) Staff proposal on the process for Integrated Resource Planning (“IRP”).

**I. INTRODUCTION**

The Ruling seeking comment on the ED Staff proposal on the process for IRP was issued on May 16, 2017. This Ruling requests that all parties, to the extent they wish, respond in their comments to several questions about the major recommendations contained in the ED staff proposal attached to the Ruling.

**II. BAMx COMMENTS**

In this section, we include the BAMx’s responses to a subset of the questions posed in the ALJ Ruling.

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<sup>1</sup> The members of BAMx are City of Palo Alto Utilities and City of Santa Clara, *dba* Silicon Valley Power.

**Q. 7. Modeling in 2017-2018.**

- a. Do you support use of the RESOLVE modeling approach for development of a Reference System Plan in 2017-2018? Why or why not?**
- b. If you prefer an alternative approach, describe it in detail.**

BAMx generally supports the use of the RESOLVE modeling approach for development of a Reference Plan in 2017-2018. However, given the high levels of importance, novelty and complexity of this modeling, there must be high levels of transparency, documentation and disclosure regarding the modeling, including the assumptions used and the way the results are interpreted and utilized in pursuit of IRP goals. One such example is RESOLVE's objective function that minimizes the annual cost to operate the electric system across RESOLVE's footprint. According to the ED staff consultant, E3, RESOLVE co-optimizes investment and dispatch for a selected set of days over a multi-year horizon in order to identify least-cost portfolios for meeting renewable energy targets and other system goals.<sup>2</sup> However, no details on the elements of the different costs that are included in the objective function or any constraints modeled in this optimization are described in the model documentation. Therefore, we emphasize the following.

- All elements of the objective function, including investment amounts, operating costs, output levels, and constraints broken down by type of resource or measure, should be clearly identified.
- Measures and associated costs *not* included in the optimization should be fully identified and the reasons for their exclusion should be described.
- More clarity is needed on whether the only transmission costs included in the objective function of the optimization are those associated with selection of renewable resources having attributed transmission costs. Furthermore, in reporting of studies and Plan development more discussion is needed about whether additional transmission (or distribution) costs might be associated with some portfolios to a greater or lesser extent than others (e.g., portfolios containing high levels of demand-

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<sup>2</sup> RESOLVE Documentation: CPUC 2017 IRP Inputs & Assumptions (DRAFT), May 2017. p.16.

side and distributed resources), and how this should be addressed either in Reference Plan development or subsequently.

- BAMx is not clear whether RESOLVE’s optimization can effectively trade off transmission needed for reliability versus the non-transmission alternatives, including conventional and renewable generation, storage, demand response and targeted Energy Efficiency (EE). From our review of the RESOLVE model, it appears that the EE assumptions are static and are part of the user-selected specific load scenario. BAMx believes that any capacity expansion tool used for the IRP needs to have the capability to optimize across all the resources including generation, transmission and preferred resources to develop the least cost resource portfolios.

**Q. 9. Modeling Assumptions. Do you have any specific changes to recommend to the modeling assumptions detailed in Chapter 4 and Appendix B of the Staff Proposal and the associated spreadsheet Scenario Tool? What are they and why? Indicate a publicly-available source of your recommended assumptions.**

As described more fully in responses to Question 17 (Supply-side resources), the transmission capacity and cost assumptions should be more clearly documented beyond what was contained in the RPS Calculator v. 6.2 documentation. Estimates of capacity available on existing transmission to deliver out-of-state (OOS) renewable energy should be identified.

Furthermore, the categorization and inclusion (in various cases) of demand-side and distributed (equivalent to demand-side?) resources should at least be clarified and perhaps be refined as described in response to the above-listed questions. Additionally, it should be clarified and reported how the “default” level of assumed energy efficiency (= mid AAEE plus preliminary estimates of AB 802-associated additional savings) specifically corresponds to the State policy goal of doubling EE savings by 2030. BAMx believes a more representative scenario implementing the State policy is the *SB350 – Mid AAEE x2 + AB802* scenario that combines the State policy goals of doubling EE savings by 2030 with additional load reduction measures associated with savings enabled by AB802.

**Q. 16. Demand-side resources.**

- a. Is the treatment of these resources in the staff's recommended approach reasonable? What changes would you suggest and why?*

BAMx believes that the staff's recommended approach is reasonable and important. It is critical to obtain the required location-specific information about the costs and benefits of the demand-side resources. To our knowledge, previous efforts at the CPUC have not identified the locational aspects of the demand-side resources. Therefore, BAMx believes that implementing this element of the IRP promises to be one of the major contributions minimizing the overall infrastructure costs while complying with the State's policy goals.

**Q. 17. Supply-side resources.**

- a. Is the treatment of these resources in the staff's recommended approach reasonable? What changes would you suggest and why?*

Similar to the demand-side resources, the locational impacts of the supply-side resources on infrastructure needs should be incorporated into the modeling. As discussed during the June 7<sup>th</sup> webinar, it appears that the amounts of OOS renewable generation that can be delivered from different areas on existing transmission, while uncertain, has been conservatively estimated. Updating and refining these estimates should be a high priority.

**Q. 20. Reference System Plan development.**

- a. What methodology should staff use to develop a recommendation for the portfolio to include in the Reference System Plan?*

At this time BAMx does not offer or support a particular methodology for distilling the voluminous modeling results to ultimately produce a Reference Plan. However, it is clear that

- i. Having explicit, clearly documented method(s) is essential for deriving useful information from the deluge of information that must be incorporated into the analysis.
- ii. There is no "right" distillation method and any selected single method will likely be controversial and inevitably "wrong" in hindsight.
- iii. The process of applying any distillation method(s) will produce insights that inform improved and more efficient modeling and assessment going forward.

Thus, rather than applying a single methodology to distill *preliminary* modeling results, CPUC and parties should consider applying and learning from multiple contrasting, *simple and straightforward* “distillation” methodologies, avoiding excessive debate about the “optimal” method - - in preparation for a “wiser by experience” approach to the subsequent round of studies and Reference Plan development.

**Q. 36. Alignment with CEC’s Integrated Energy Policy Report (IEPR) and California Independent System Operator’s (CAISO’s) Transmission Planning Process (TPP).**

- a. Do you support the Staff Proposal approach to coordination with the IEPR and TPP processes? What changes would you recommend and why?**

Traditionally, the CPUC’s most current *LTPP Assumptions and Scenarios* document has acted as an input into the CAISO’s TPP process. The ED staff proposal anticipates that the IRP Reference System Portfolio—and other portfolios documented in the Reference System Plan—could serve a similar role in informing the CAISO 2018-19 TPP process. CPUC staff proposes that CAISO use either the Reference System Plan or one or more of the alternative portfolios produced during Reference System Plan development for a special study in its 2018-19 TPP cycle. BAMx supports this proposal, but encourages the CPUC to strive for a shorter lead time for feedback between the CEC IEPR, CAISO TPP and CPUC IRP. Historically, once the CPUC provided the RPS portfolios to the CAISO and the CAISO modeled them in its annual TPP process, it has taken almost a year for the CPUC to incorporate the revised transmission cost and transmission availability data into the CPUC models, such as the RPS Calculator.

It would not be an economically efficient outcome if the CAISO approves a “policy-driven” transmission project in a particular transmission planning process cycle based upon the CPUC-provided resource portfolios that could have been further refined with revised transmission-related information from the CAISO in the same TPP cycle. Therefore, BAMx strongly encourages the CPUC to seek feedback from the CAISO before the resource portfolios associated with the System Reference Plans or Preferred Plans going forward are officially adopted. One way to achieve this goal would be for the CAISO to run power flow screening studies to identify issues, if any, with the location and capacity of the resources selected in the

preliminary CPUC's System Reference Plans (or Preferred Plans going forward) to check whether any significant curtailments of generating resources and/or trigger the need for additional transmission upgrades. Such information can then be fed back into the CPUC's capacity expansion tools to generate revised System Reference or Preferred Plans that potentially lower the overall system cost. BAMx recommends deployment of a process that would allow for a quick turnaround for each data exchange iteration between the CPUC IRP and the CAISO.

### III. CONCLUSION

BAMx appreciates the opportunity to provide responses to the questions about the major recommendations contained in the ED staff proposal, and looks forward to participating in the IRP proceeding.

June 28, 2017

Respectfully submitted,

/s/ Debra Lloyd

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For the

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